

REMARKS

In the Office Action under reply, the Examiner has rejected claims 36, 38, and 39 under 35 U.S.C. §102(b) as anticipated by various references. Claims 40-47 and 63 were indicated as allowable save for their dependency on rejected claims and claims 1, 3-13, and 28-35 were objected to for containing subject matter drawn to non-elected species, but were indicated as allowable if limited to the searched and examined subgenus, i.e., the subgenus wherein Z is sulfur, m is 0, n is 1, p is 1, Y² is methylene, and T is -O-.

In the present amendment, claims 5 and 40 have been canceled and claims 1, 6-8, 11, 28, 30, 32, 34, 36, and 41-43 have been amended. Thus, claims 1, 3, 4, 6-13, 28-36, 38, 39, 41-47, and 63 are now pending. The Examiner's rejections and objections are addressed in full by the above amendments.

The Amendments to the Claims:

Independent claims 1, 28, 30, 32, 34, and 36 have been amended to specify that Z is sulfur, m is 0, n is 1, p is 1, Y² is methylene, and T is -O-. The structures within the claims have been amended to reflect these changes. As now redundant, dependent claims 5 and 40 have been cancelled. Cancellation of these claims is without prejudice, without intent to abandon any previously claimed subject matter, and without intent to acquiesce in any rejection of record. Dependent claims 7, 8, 11, 42, and 42 have been accordingly amended to remove redundant definitions.

It is to be noted that Applicants have made these amendments only in the interest of expediting prosecution and expressly reserve the right to pursue claims to any excluded subject matter in later continuing and/or divisional applications.

Accordingly, no new matter has been added and entry of the new claims is in order.

The Rejections Under 35 U.S.C. §102(b):

Claims 36 and 38 have been rejected over Radics et al. The Examiner has cited the reference for its disclosure of 4-[(4-chlorophenyl)methylthio]-6-ethyl-1,3,5-triazine-2-ylamine. As the independent claims have been amended to require that the 6 position of the triazine moiety be substituted with an R³-oxymethyl group, the referenced compound is no longer within the scope of the pending claims and does not constitute an anticipatory disclosure. Reconsideration and withdrawal of the rejection are accordingly in order and are hereby requested.

Claims 36, 38, and 39 have been rejected over Maekawa et al. In this rejection, the Examiner has cited the disclosure of 2-[(4-amino-6-methylthio-1,3,5-triazin-2-yl)methyl]benzo[c]azoline-1,3-dione. As was the case with the rejection over Radics et al., the requirement in the present claims that the 6 position of the triazine moiety be substituted with an R³-oxymethyl group excludes the compound referenced by the Examiner. Reconsideration and withdrawal of the rejection are in order and are requested.

The Examiner's Comments Regarding the Allowability of Claims 40-47 and 63 and claims 1, 3-13, and 28-35:

As stated above, the Examiner has indicated that claims 40-47 and 63 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims limited to the subgenus wherein m is 0, n is 1, p is 1, Y² is methylene, and T is -O-. Similarly, the Examiner indicated that claims 1, 3-13, and 28-35 would be allowable if limited to the same subgenus.

Applicants appreciate the Examiner's guidance on this issue and his clarification of the searched and examined subgenus. In response to the Examiner's comments and in the

interest of expediting prosecution, the independent claims are now focused on the
aforementioned subgenus and all claims are now believed to be allowable.

CONCLUSION

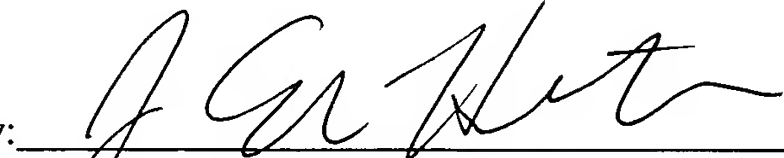
For the foregoing reasons, applicant submits that the claims comply with the
requirements 35 U.S.C. §102(b) are in condition for allowance. A Notice of Allowance
is requested, and a prompt mailing thereof would be much appreciated.

Should the Examiner have any questions regarding this amendment, he or she is
welcomed to contact the undersigned attorney at (650) 384-8755. Applicants respectfully
request that all further communication be sent to the undersigned attorney at the
following address:

CV Therapeutics, Inc.
3172 Porter Drive
Palo Alto, CA 94304

Respectfully submitted,

Date: 3/30/04

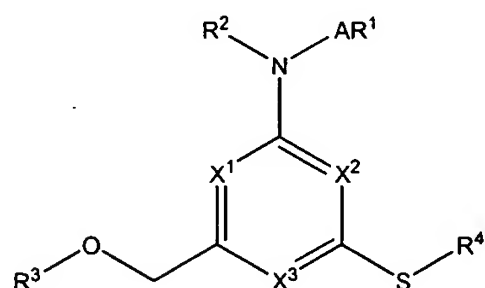
By: 
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APPENDIX A

CLEAN COPY OF CLAIMS AS AMENDED HEREIN

1. A method of treating a disease state in a mammal that is alleviable by treatment with an agent capable of increasing ABCA-1 expression, comprising administering to a mammal in need thereof a therapeutically effective dose of a compound of the Formula I:



Formula I

wherein:

A is -C(Z¹)-, -C(Z¹)-NH-, SO₂, or a covalent bond;

where Z¹ is oxygen or sulfur;

R¹ is hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

R² is hydrogen, alkyl, or cycloalkyl; or

R¹, R², and A when taken together with the nitrogen atom to which they are attached form a nitrogen bearing heterocycle;

R³ is optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

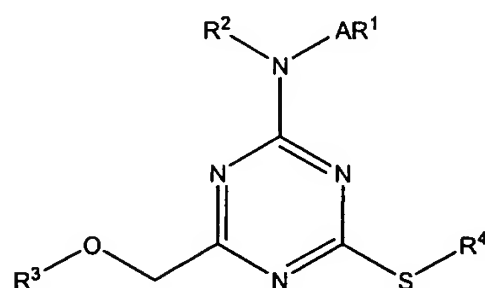
R⁴ is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl; and

R⁵ is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl

with the proviso that when A is a covalent bond and R² is hydrogen then R¹ cannot be phenyl.

3. The method of claim 1, wherein R² is hydrogen and R⁴ is optionally substituted alkyl.
4. The method of claim 3, wherein R³ is optionally substituted aryl or optionally substituted heteroaryl.
6. The method of claim 4, wherein A is a covalent bond, and R¹ is hydrogen.
7. The method of claim 6, wherein R³ is optionally substituted phenyl.
8. The method of claim 7, wherein R⁴ is alkyl of 1-8 carbon atoms.
9. The method of claim 8, wherein R³ is 4-t-butylphenyl and R⁴ is methyl, namely 6-{{4-(tert-butyl)phenoxy}methyl}-4-methylthio-1,3,5-triazine-2-ylamine.
10. The method of claim 8, wherein R³ is 4-t-butylphenyl and R⁴ is n-pentyl, namely 6-{{4-(tert-butyl)phenoxy}methyl}-4-pentylthio-1,3,5-triazine-2-ylamine.
11. The method of claim 7, wherein R⁴ is alkyl of 1-8 carbon atoms.
12. The method of claim 11, wherein R³ is 3-chlorophenyl, R⁴ is methyl, and R⁵ is hydrogen, namely 4-[(3-chlorophenylamino)methyl]-6-methylthio-[1,3,5]triazin-2-ylamine.
13. The method of claim 11, wherein R³ is 2,4-dimethoxyphenyl, R⁴ is methyl, and R⁵ is hydrogen, namely N-{{(3,5-dimethoxyphenyl)aminomethyl}-4-methylthio-1,3,5-triazine-2-ylamine};

28. A method for treating a disease or condition in a mammal that can be treated with a compound that elevates serum levels of HDL cholesterol, comprising administering to a mammal in need thereof a therapeutically effective dose of a compound of Formula I.



Formula I

wherein:

A is -C(Z¹)-, -C(Z¹)-NH-, SO₂, or a covalent bond;

where Z¹ is oxygen or sulfur;

R¹ is hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

R² is hydrogen, alkyl, or cycloalkyl; or

R¹, R² and A when taken together with the nitrogen atom to which they are attached form a nitrogen bearing heterocycle;

R³ is optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

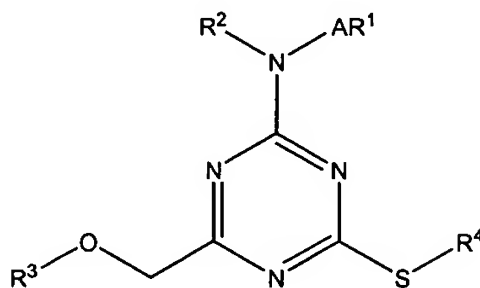
R⁴ is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl; and

R⁵ is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl

with the proviso that when A is a covalent bond and R² is hydrogen then R¹ cannot be phenyl.

29. The method of claim 28, wherein the disease state or condition is coronary artery disease or atherosclerosis.

30. A method for treating a disease or condition in a mammal related to low HDL cholesterol levels, comprising administering to a mammal in need thereof a therapeutically effective dose of a compound of Formula I:



Formula 1

wherein:

A is -C(Z¹)-, -C(Z¹)-NH-, SO₂, or a covalent bond;

where Z¹ is oxygen or sulfur;

R¹ is hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

R² is hydrogen, alkyl, or cycloalkyl; or

R¹, R² and A when taken together with the nitrogen atom to which they are attached form a nitrogen bearing heterocycle;

R³ is optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

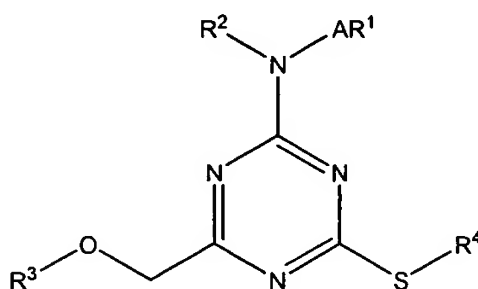
R⁴ is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl; and

R^5 is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl

with the proviso that when A is a covalent bond and R^2 is hydrogen then R^1 cannot be phenyl.

31. The method of claim 30, wherein the disease state or condition is coronary artery disease or atherosclerosis.

32. A method for treating a disease or condition in a mammal that can be treated with a compound that promotes cholesterol efflux from cells, comprising administering to a mammal in need thereof a therapeutically effective dose of a compound of Formula I.



Formula I

wherein:

A is $-C(Z^1)-$, $-C(Z^1)-NH-$, SO_2 , or a covalent bond;

where Z^1 is oxygen or sulfur;

R^1 is hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

R^2 is hydrogen, alkyl, or cycloalkyl; or

R^1 , R^2 and A when taken together with the nitrogen atom to which they are attached form a nitrogen bearing heterocycle;

R^3 is optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

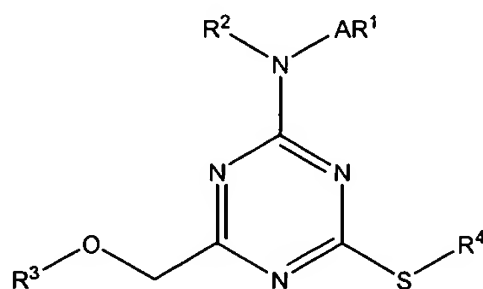
R^4 is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl; and

R^5 is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl

with the proviso that when A is a covalent bond and R^2 is hydrogen then R^1 cannot be phenyl.

33. The method of claim 32, wherein the disease state or condition is coronary artery disease or atherosclerosis.

34. A method for treating a condition related to coronary artery disease in a mammal that can be usefully treated with a combination of a compound that elevates serum levels of HDL cholesterol and a compound that lowers LDL cholesterol, comprising administering to a mammal in need thereof a therapeutically effective dose of a compound of Formula I



Formula I

wherein:

A is $-C(Z^1)-$, $-C(Z^1)-NH-$, SO_2 , or a covalent bond;

where Z^1 is oxygen or sulfur;

R^1 is hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

R^2 is hydrogen, alkyl, or cycloalkyl; or

R^1 , R^2 and A when taken together with the nitrogen atom to which they are attached form a nitrogen bearing heterocycle;

R^3 is optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

R^4 is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl; and

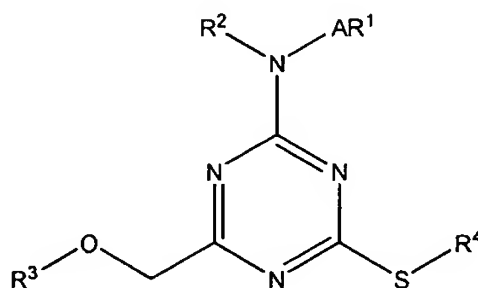
R^5 is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl

with the proviso that when A is a covalent bond and R^2 is hydrogen then R^1 cannot be phenyl

and a compound that lowers LDL cholesterol.

35. The method of claim 34, wherein the LDL cholesterol lowering compound is chosen from clofibrate, gemfibrozil, and fenofibrate, nicotinic acid, mevinolin, mevastatin, pravastatin, simvastatin, fluvastatin, lovastatin, cholestyrene, colestipol and probucol.

36. A compound of the Formula I:



Formula I

wherein:

A is $-C(Z^1)-$, $-C(Z^1)-NH-$, SO_2 , or a covalent bond;

where Z^1 is oxygen or sulfur;

R^1 is hydrogen, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted alkynyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

R^2 is hydrogen, alkyl, or cycloalkyl; or

R^1 , R^2 and A when taken together with the nitrogen atom to which they are attached form a nitrogen bearing heterocycle;

R^3 is optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl;

R^4 is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl; and

R^5 is hydrogen, optionally substituted alkyl, optionally substituted cycloalkyl, optionally substituted heterocyclyl, optionally substituted aryl, or optionally substituted heteroaryl

with the proviso that

when A is a covalent bond, R^1 and R^2 are both hydrogen, Y^2 is methylene, and R^4 is methyl or ethyl, R^3 cannot be lower alkyl or unsubstituted phenyl; and

when A is a covalent bond, R^1 cannot be substituted phenyl

38. The compound of claim 36, wherein R^2 is hydrogen and R^4 is optionally substituted alkyl.

39. The compound of claim 38, wherein R^3 is optionally substituted aryl or optionally substituted heteroaryl.

41. The compound of claim 39, wherein A is a covalent bond, and R¹ is hydrogen.
42. The compound of claim 41, wherein R³ is optionally substituted phenyl.
43. The compound of claim 42, wherein R⁴ is alkyl of 1-8 carbon atoms.
44. The compound of claim 43, wherein R³ is 4-t-butylphenyl and R⁴ is methyl, namely 6- {[4-(tert-butyl)phenoxy]methyl}-4-pentylthio-1,3,5-triazine-2-ylamine.
45. The compound of claim 43, wherein R³ is 4-t-butylphenyl and R⁴ is n-pentyl, namely 6- {[4-(tert-butyl)phenoxy]methyl}-4-pentylthio-1,3,5-triazine-2-ylamine.
46. The compound of claim 43, wherein R³ is 3-chlorophenyl, R⁴ is methyl, and R⁵ is hydrogen, namely 4-[(3-chlorophenylamino)methyl]-6-methylthio-[1,3,5]triazin-2-ylamine.
47. The compound of claim 43, wherein R³ is 2,4-dimethoxyphenyl, R⁴ is methyl, and R⁵ is hydrogen, namely N- {[3,5-dimethoxyphenyl]aminomethyl}-4-methylthio-1,3,5-triazine-2-ylamine.
63. A pharmaceutical composition comprising at least one pharmaceutically acceptable excipient and a therapeutically effective amount of a compound of claim 36.